



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

NEW BEDFORD
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December 30, 1991

Dear Councilor,

Enclosed is a package of information relating to the New Bedford Harbor cleanup. The first piece consists of answers to questions asked by Councilor Kruger at the December 3, 1991 Ordinance Committee meeting. The second piece is a fact sheet summarizing the design of the remedy for the Hot Spot portion of the harbor. This fact sheet was sent to all the council members and the site mailing list (totaling roughly 800 names) in October, 1991. The third piece lists some basic facts, and answers some basic questions about the project. This one-page fact sheet was included in the New Bedford Standard Times and the Portuguese Times on October 31, 1991. The fourth and final piece of information is a letter from David Hammond to EPA Administrator William Reilly, along with EPA's response. The response addresses certain issues of concern often raised by the community.

EPA will continue to supply interested community members with accurate and timely information about the New Bedford Harbor Superfund site. The agency is currently working with local community groups to set up monthly meetings to discuss the Hot Spot cleanup.

If you would like more information on the site, or on Superfund in general, please contact me or Gayle Garman, Remedial Project Manager at (617) 223-5522.

Sincerely,

Jim Sebastian
Community Relations Coordinator
(617) 565-3423

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cc: Gayle Garman, EPA
Paul Craffey, Massachusetts DEP
Mike Glinski, New Bedford Planning Office



**RESPONSE TO QUESTIONS POSED BY COUNCILOR KRUGER
AT ORDINANCE COMMITTEE MEETING ON
DECEMBER 3, 1991**

What is the extent of contaminated sediment to be treated?

Approximately five acres containing 10,000 cubic yards of the most contaminated sediment will be dredged, dewatered and incinerated as part of the hot spot cleanup. Lower levels of contamination throughout the rest harbor will be addressed in a second cleanup plan. A proposal for this plan is scheduled to be available for public comment in January.

To what depth does the contamination extend?

At the Hot Spot, most of the contamination is concentrated in the first two feet of sediment with lower levels extending to four feet.

Will any reclamation of natural resources be required following dredging?

EPA has not planned any remediation of natural resources in association with the Hot Spot cleanup, because there may be additional dredging in the estuary and harbor during the second phase of the cleanup. EPA will soon be seeking comments on the issue of natural resource reclamation during the comment period for the second cleanup plan.

What will happen to residue from incineration?

Water drained from the sediment prior to incineration will be treated in an on-site waste water treatment plant. Ash resulting from incineration will be tested to determine its toxicity. If the ash is not toxic, it will be placed in the confined disposal facility (CDF) on the site. If the ash is toxic, it will be made safe through solidification and then disposed of on site.

What is the lot number of the area to be used for de-watering, ash handling, and incineration (commonly referred to as "the site").

According to New Bedford City Planning Office records, the site includes lot numbers 220, 119, and 120, on plot #93.

Have studies have been conducted on marine life in the harbor?

There have been extensive surveys conducted on finfish and shellfish in the harbor. Laboratory studies indicate that PCBs and heavy metals, both substances of concern in New Bedford Harbor, are harmful to the health and reproduction of marine organisms. Certain organisms are no longer found in the harbor; this is presumably do, at least in part, to PCB contamination.

What is the current level of exposure to PCBs in the air and sediment and associated health risks?

The state limit for PCBs in air is 0.5 ng per cubic meter, averaged over a year. Thus, according to state regulations, levels over 0.5 ng present a risk to human health. Levels measured in air around the Hot Spot are as high as 471 ng.

What type of dredge will be used to dredge PCB-contaminated sediment?

The dredge chosen for use in this project is known as a cutterhead dredge, which among other features, tends not to resuspend sediments. The cutterhead dredge was found to be well suited for the project during a pilot study conducted in 1990.

What schools are located near the incinerator?

According to the New Bedford Public Schools, there are for schools in within one mile of the site. Please see December 13, 1991 correspondence from Constantine Nanopoulos. EPA has considered the proximity of schools a residential areas in the design of the incineration portion of the Hot Spot cleanup.

Has the tide had any effect on the contaminated sediment?

Yes. With every tidal cycle, a certain amount of PCBs are transported throughout the harbor. However, because concentrations of PCBs are so high in the Hot Spot, and PCBs are very persistent in the environment, high levels of PCBs remain in Hot Spot.

Also, EPA has taken the tides into account in planning the dredging portion of the cleanup. Workers will only dredge during the incoming high tide.

What is the geological makeup of the harbor? Will rocks be a problem during dredging?

Most of the sediment to be dredged does not contain rocks. However, the cutterhead dredge was chosen, in part, because rocks do not interfere with its operation.

Will PCB proliferate as a result of incineration?

PCBs do not proliferate (reproduce or increase) in the environment. During the incineration process, 99.9999 percent of the PCBs processed in the incinerator will be destroyed. The .0001 percent that may escape into the environment is within state and federal limits, and well below levels occurring in the air above the harbor now.

More information on this Hot Spot cleanup can be found in the fact sheet also included in this packet or in the information repository at the New Bedford Public Library. Please address any questions to Jim Sebastian, community relations coordinator, (617) 565-3423 or Gayle Garman, site manager (617) 223-5522.



New Bedford Harbor Cleanup

FACTS



The following are important points residents of New Bedford should keep in mind before, during, and after the upcoming City of New Bedford non-binding referendum on polychlorinated biphenyl (PCB) incineration.

- * The U.S. Environmental Protection Agency is not associated with the upcoming referendum. EPA had no part in placing the question on the ballot or in the wording of the question.
- * The plan for dredging and incinerating some of the PCB-contaminated sediment from the harbor is not a proposed remedy, but a final remedy determined in April of 1990.
- * The cleanup plan was signed by EPA after extensive public participation and comment, including a three month public comment period, several public information meetings and hearings, and extensive discussions with city officials and citizens from the four surrounding communities.
- * Everyday, with every tidal cycle in the harbor, PCBs volatilize (evaporate) into the air and are then transported throughout the area. Levels of PCBs measured in the air in surrounding communities average 20 times the state regulatory limit, while at low tide, airborne PCBs over the most contaminated area of the harbor are 100 times the limit.
- * Shellfish living in the harbor are currently exposed to extremely high levels of PCBs. Finfish in the water are also exposed to PCBs that are released from the sediment with every tidal cycle and during storms.
- * During the remedy selection process, EPA looked at over 90 different cleanup alternatives, 4 of which were examined in detail.
- * Any change in the remedy at this point would result a delay of several years and add millions of dollars to the cost of the project.
- * The dredging and incineration plan is the first part of a two-part harbor cleanup. A second cleanup plan dealing with other areas of the harbor is currently being developed by EPA and other state and federal agencies.

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QUESTIONS AND ANSWERS

** Why is EPA incinerating PCBs?*

The incineration is part of a plan to cleanup the most polluted part of the Harbor, often called the "Hot Spot." The plan includes dredging the contaminated sediment, removing the water from the sediment before incineration, and storing the ash produced as a result of the incineration. EPA developed this plan after many years of studies, testing, and public involvement.

** Has incineration been used at other, similar sites?*

Yes. Incineration is a proven technology for destroying PCBs. Incineration is being used effectively to destroy PCBs at sites across the country, including a facility in Pittsfield, Massachusetts. However, contaminants at each site are different, and this particular incinerator is being designed specifically for contaminants found in New Bedford Harbor sediments.

** How long will the Hot Spot cleanup take?*

Approximately 18 months. Contractors will begin preparing the site this winter. Dredging is scheduled to take place in the fall of 1992. After the sediments are dewatered in a large containment facility, incineration will begin and last four to six months.

** How long will the incinerator stay on site?*

Approximately six to eight months. Because the incinerator is a temporary, transportable facility, it will remain on site only as long as is necessary to treat the amount of sediment specified in the remedy. The incinerator can not and will not be used to treat any other materials.

** How are the PCBs destroyed in the incinerator?*

PCB-contaminated sediment will be heated at a very high temperature (2200 degrees Fahrenheit). This process breaks the chemical bonds that form the hazardous compounds and combines them with oxygen, resulting in safe, stable materials such as water and carbon dioxide.

** What will come out of the incinerator during the process?*

Exhaust from the incinerator will consist mostly of air, water vapor, and carbon dioxide. Sophisticated pollution control equipment will be included in the system to trap any residual contamination. Extensive federal regulations dictate that 99.9999% of all the contaminants be destroyed and removed,

meaning that less than one-millionth of what enters the incinerator is not destroyed.

** What happens to materials, such as metals, that are not destroyed in the incinerator?*

While the incinerator will effectively destroy PCBs, most of the metals found in New Bedford Harbor sediment will remain in the ash created in the process. The ash will be stored in a sealed disposal facility, also located at the foot of Sawyer Street.

** What happens to the rest of the metals?*

The pollution control equipment is designed to remove contaminants, including metals, not destroyed during incineration. Only a very small, closely monitored, and strictly limited amount of contaminants will be released into the atmosphere. If monitoring shows that the safe levels may be exceeded, the system will be shut down immediately and adjusted back to safe levels.

** Will dioxins be released in the process?*

Dioxin is not one of the contaminants in the harbor, and no dioxin will be fed into the incinerator. The high temperatures required in this incinerator do not promote the formation of dioxins. Nevertheless, the system will be tested before incineration begins to determine exactly what the exhaust will contain.

** Did EPA look at any other treatment technologies?*

Yes. EPA tested other treatment technologies at the site. None of the other technologies were found to be as effective as incineration for the highly contaminated sediments in the Hot Spot.

Those who would like to find out more about the cleanup of New Bedford Harbor, or would like a six page fact sheet on incineration of New Bedford Harbor PCBs, should contact Jim Sebastian, EPA Community Relations Coordinator at (617) 565-3423.





Limpeza do Porto de New Bedford



FACTOS

Os seguintes pontos são importantes para os residentes de New Bedford que devem ter em mente antes, durante e depois, o referendun que a cidade New Bedford apresentará em breve sobre a incineração de PCBs (bifelinos polichlorinados).

- * A Agencia Federal de Protecção do Meio Ambiente (EPA) de nenhum modo esta associada ao mencionado referendun nem e responsável no todo ou em parte pela elaboração da pergunta posta a votação.*
- * O plano de dragagem e incineração do lodo contaminado com PCBs de certas partes do porto, nao se propoe remediar o assunto em questao mas sim dar uma cura final determinada em Abril de 1990.*
- * O plano de limpeza foi assinado pela EPA depois dum longo periodo de participação pública, quer atraves de reuniões e audições publicas, quer ouvindo cidadãos e oficiais das quatro comunidades circunvizinhas.*
- * Com os movimentos da maré, os PCBs evaporam no ar, alastrando-se na área até às comunidades visinhas, onde se tem verificado uma contaminação média vinte vezes superior ao limite regulamentado pelo Estado. Sobre as áreas do porto mais afectadas com a maré baixa, existe uma contaminação superior a 100 vezes à do limite.*
- * Niveis de PCBs extremamente altos tem afectado os mariscos do porto. O mesmo tem acontecido com o peixe local, principalmente com a maré baixa e durante temporais.*
- * Durante a escolha das soluções do assunto, a EPA debruçou-se sobre mais de 90 alternativas em pormenor.*
- * Qualquer alteração feita neste momento ao método de cura, traria um atrazo de varios anos e uma despesa adicional de milhões de dólares.*
- * O plano de dragagem e incineração é a primeira das duas fases da limpeza do porto. A segunda fase, repeitante a outras áreas do porto, está presentemente a ser preparada pela EPA assim como outras agencias estaduais e federais.*

Perguntas e Respostas

*** *Porque está a EPA incinerando PCBs?***

A incineração é parte dum plano complicado para limpar os sítios mais poluídos do porto, muitas vezes referido como "Hot Spot". O plano também inclui dragagem do sedimento contaminado, remoção da água do sedimento antes da incineração, e armazenagem das cinzas resultantes da queima das substâncias tóxicas. A EPA desenvolveu este plano depois de muitos anos de estudo e experiência.

*** *Noutros sítios semelhantes tem sido usada incineração?***

Tem, sim. Tem sido provado tecnicamente que a incineração destrói PCBs. Este processo tem sido usado efectivamente para destruir PCBs em cidades em diferentes partes do país, incluindo um lugar em Pittsfield, Massachusetts. Contudo porque em diferentes sítios existem diferentes matrizes contaminados, este aparelho foi desenhado especificamente para queimar substâncias tóxicas como os existentes no Porto de New Bedford.

*** *Quanto durará a limpeza do "Hot Spot"?***

Aproximadamente 18 meses. Durante este inverno os empreiteiros depois de terminar a esquematização do trabalho, darão início a preparação do sítio, para que a dragagem possa principiar no outono de 1992. Depois da secagem dos sedimentos, começar-se-á a incineração, provavelmente no outono de 1992, e que durará de 4 a 6 meses.

*** *Durante quanto tempo ficará o forno de incineração no sítio?***

Aproximadamente de 6 a 8 meses. Porque é um trabalho temporário e uma máquina transportável, será removida logo que desnecessária, e não será usada no tratamento de quaisquer outros materiais.

*** *Como são os PCBs destruídos por incineração?***

Materiais contaminados com PCBs serão submetidos a temperaturas muito elevadas (2200 graus Fahrenheit). Este processo provoca a decomposição de tais substâncias e a sua

mistura com oxigénio, resultando em substâncias que não afectam a saúde pública, tais como água e dióxido de carbono.

*** *O que é que se liberta durante o processo de incineração?***

Libertam-se, principalmente ar, vapor de água e dióxido de carbono. Equipamento altamente especializado em controlar poluição será incluído no sistema de modo que possa filtrar quaisquer resíduos tóxicos. Deste modo, e de acordo com os regulamentos federais, 99.9999% das substâncias tóxicas serão destruídas.

*** *Que acontece aos metais que não são destruídos pela queima?***

A maior parte dos metais existentes no lodo do Porto de New Bedford permanecerão com as cinzas criadas neste processo e serão armazenados ao fundo da Sawyer St. em contentores selados.

*** *Que acontece ao resto dos metais?***

O equipamento que controla a poluição separa materiais tóxicos, incluindo metais, que não são destruídos durante a incineração. Somente uma pequena parte, não prejudicial à saúde pública, será libertada na atmosfera. Se, no decorrer da operação a aparelhagem acusar nível de poluição superior ao normal, o sistema será fechado imediatamente até ser corrigido o problema.

*** *Durante o processo haverá libertação de "dioxins"?***

"Dioxins" não faz parte dos materiais contaminados do Porto de New Bedford nem as temperaturas elevadas da aparelhagem o produzem. No entanto, o sistema será analisado antes do processo de incineração para determinar exactamente o que a emissão contém.

Quem quiser saber mais sobre este assunto, ou esteja interessado em receber um livrete sobre incineração de PCBs do Porto de New Bedford, deverá contactar Jim Sebastian, Coordenador de Relações Comunitárias da EPA, telefone (617)565-3423.

10/17/91

To: Mr. William Reilly;

I'm writing to you in regards to incineration here at New Bedford, Ma. As you know here at New Bedford we have a Superfund site because of high concentrations of PCB's in our harbor, and estuary Acushnet River. There is also of course many types of heavy metals. Region I EPA has a R.O.D. to use a mobile incinerator at the bottom of Sawyer St in New Bedford. We are in a heavily populated area of the city and two towns across the river. Both sides of the river are heavily populated. We are very concerned about the safety of incineration of any type in a populated area and the ~~SEA~~ C-DF site or possible sites. Many people in New Bedford feel it can be done in a safer and less or at the same cost as incineration. We are aware of "BCD" from Cinn, Ohio EPA I believe. We formerly request you look into this issue and let's try a different technology here at New Bedford, Ma. You could help by asking for EPA Region I to overturn their Record of Decision. With EPA's own alternative technologies to be used, there would be no loss of faith in EPA. A lot of red tape could be cut through or avoided because it would be less work involved since it is the Agency itself. Please consider this request very seriously. Our concern is very serious and we know that EPA generally has the right idea but we ^{feel} that incineration is not the answer to pollution. Thank you sincerely

"Hands Across The River" (coalition)

David Hammond

Phone 1-508/991/4529

David Hammond
51 Upton St.
New Bedford, MA 02746



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

December 13, 1991

David Hammond
51 Upton Street
New Bedford, MA 02746

Dear Mr. Hammond:

Thank you for your recent letter to Administrator William K. Reilly regarding remediation of the hot spot portion of the New Bedford Harbor Superfund site. Your letter was referred to me for response. Please be assured that both EPA Headquarters and Region I have given much serious thought and effort to the investigation of potential remediation methods for New Bedford Harbor. EPA also has demonstrated a consistent commitment to public involvement in decisions about New Bedford Harbor remediation.

In 1982, EPA presented its first proposed Remedial Action Master Plan (RAMP) in response to the contamination of the harbor and solicited comment at public meetings held in New Bedford. These comments were evaluated and incorporated, as appropriate, into the final Remedial Action Master Plan. This final RAMP outlined the site investigation which resulted in the 1984 feasibility study for the site.

EPA held three public meetings in New Bedford regarding the 1984 feasibility study and, at public request, extended the comment period. This feasibility study presented five remedial options, four of which involved dredging. Because officials and citizens of New Bedford questioned whether the proposed dredging could be accomplished without spreading PCB contamination, further endangering public health and the harbor, EPA decided to expand upon the 1984 feasibility study. Consequently, EPA contracted with the Army Corps of Engineers for an Engineering Feasibility Study (EFS) to evaluate technologies for dredging, treatment, and disposal of New Bedford Harbor sediments. One part of the EFS was the pilot study which evaluated the effectiveness of three types of dredges and two methods of onsite sediment disposal. Three more public meetings were held in New Bedford to explain the proposed pilot study and to answer questions.

EPA also conducted laboratory (i.e. bench-scale) testing to



evaluate the effectiveness of solvent extraction (B.E.S.T.), alkalai-metal dechlorination (KPEG), solidification, vitrification, and advanced aerobic biological treatment on sediment from New Bedford Harbor. In addition, as part of the national Superfund Innovative Technology Evaluation program, a pilot-scale demonstration of a second solvent extraction method utilizing liquified propane as the solvent was conducted at the site. Opportunities were provided for the public to observe both the pilot project and the demonstration of solvent extraction. If you are interested in a more detailed discussion of these treatment technologies and their evaluation for use at New Bedford, please refer to the "Overview of Bench-Scale Treatment Technology Program - New Bedford Harbor Feasibility Study," E.C. Jordan Co. for EBASCO Services, Inc., (August 1989). This report is included in the administrative record for the hot spot which is available for public review at the New Bedford Free Library and at EPA Region I offices in Boston.

The testing of alternative technologies on New Bedford sediments indicated that none of them achieved the 99.9999% destruction and removal efficiency required as a minimum operating criterion for an incinerator. Neither did any of these treatability studies demonstrate that an alternative technology was markedly safer, more effective, or less expensive than incineration.

Citizen involvement in EPA's decision-making process for New Bedford Harbor increased significantly in 1987 when the Greater New Bedford Environmental Community Work Group (CWG) was formed with the support of EPA. The CWG membership comes from each of the surrounding four communities and includes representatives from environmental, fishing, and business interests, as well as the general public. The CWG received one of the first EPA Technical Assistance Grants, allowing them to hire an independent technical consultant to assist it in evaluating the many reports and proposals generated by the extensive and multi-faceted investigation of New Bedford Harbor. They sponsored one of the four meetings held in New Bedford between August 3, 1989, and September 25, 1989, to discuss and receive comments on the feasibility study and proposed remedial plan for the hot spot. The incineration of hot spot sediments which causes you concern was part of the proposal presented and discussed at this series of meetings.

Incineration is the most widely practiced and permitted method of destroying organic hazardous wastes. Furthermore, the protection of human health and the environment is EPA's first criterion in selecting a preferred remedial alternative. The preferred alternative also must provide short-term effectiveness, i.e., it

must not pose an unnecessary risk to onsite workers, the community, or the environment during the proposed remedial action.

Base-Catalyzed Dechlorination (BCD) that you mention in your letter is a new and innovative technology that eventually may prove effective in treating PCB-contaminated soils. However, at this time, the BCD process has only been demonstrated on a laboratory scale. The Navy's pilot project in Stockton, California, has not yet treated any contaminated soil, and further testing is currently delayed. If the BCD process proves effective at Stockton, the Navy plans to utilize the process at a larger site on the island of Guam. The Stockton site is not a Superfund site and the waste to be treated is 100 cubic yards of soil at PCB levels of 25-100 ppm. This is very different from the 10,000 cubic yards of sediment at PCB levels of 4,000 to over 200,000 ppm to be remediated by incineration at New Bedford Harbor.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) which created the Superfund program, directs EPA to solicit public comment on agency proposals at specified times in the remedial process. As required by CERCLA, and described above, EPA solicited public comment on the proposed remediation for the hot spot. EPA's responses to all comments significant to the remedy are found in the Responsiveness Summary, which was issued as an appendix to the Record of Decision (ROD). In writing CERCLA, Congress required significant public participation during remedy selection, but it recognized that EPA objective of performing CERCLA cleanups would be frustrated if EPA were required to reopen a ROD upon any request.

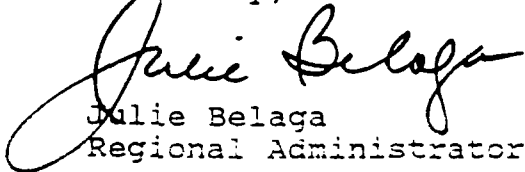
The National Contingency Plan (NCP), however, does provide a procedure for addressing comments submitted after the remedial decision has been made. Pursuant to 40 C.F.R., Section 300.825(c), EPA is required to consider such comments "only to the extent that the comments contain significant information not contained elsewhere in the Administrative Record file, which could not have been submitted during the public comment period, and which substantially support the need to significantly alter the response action." Your letter has only supplied information that, with the exception of the BCD process, was available and was considered in EPA's selection of a remedial alternative for the New Bedford Harbor hot spot. The BCD treatment process is very promising, but it may not be available for commercial use

for several years. Even then, BCD probably would not be the method of choice for treating the extremely high levels of contamination found in the hot spot.

It is critical that we address as expeditiously as possible the health risks to the people of New Bedford. Our assessment clearly indicates that incineration in this instance for the hot spot is the most appropriate remedy to protect the health of you and your neighbors.

I appreciate and share your interest in the New Bedford Harbor site. If you need any further assistance, you may contact me, or Ms. Gayle Garman, the Remedial Project Manager, at (617) 223-5522.

Sincerely,



Julie Belaga
Regional Administrator

cc: Honorable Gerry Studds
Joanne Griffith, EPA/HQ
Paul Craffey, Massachusetts DEP
Lydia Van Hine, GNB Community Work Group
Michael Glinski, NB City Planning Department